

APPLICANT(S): BIEBER, Avigdor et al.
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REMARKS

Applicants respectfully request reconsideration of the above-identified application in view of the foregoing amendments and following remarks.

Status of Claims

Claims 7, 13-23, and 27 were previously canceled. Accordingly, Claims 1-6, 8-12, and 24-26 remain pending in the application. Claim 1 has been amended. Applicants assert that no new matter has been added.

CLAIM REJECTIONS

35 U.S.C. § 103 Rejections

In the Final Office Action, the Examiner rejected Claims 1-6, 8-12 and 24-25 under 35 U.S.C. § 103(a), as being unpatentable over Teng (US 6,242,156) in view of Crawford et al. (US 4,430,366).

The Examiner rejected Claims 1 and 26 under 35 U.S.C. § 103(a), as being unpatentable over Teng in view of Crawford as evidenced by Nishida et al. (US 5,417,164).

Applicants have amended Claim 1 to include "so that less laser energy is needed for ablating the laser-absorbing layer than what would be needed for ablating a laser-absorbing layer not having the gradient of concentration ratios but having about the same thickness and constituents than that of the layer-absorbing layer". Support for the amendment can be found at least at page 8, lines 20-24 which recites:

"The ratio between the concentration of the metal and the concentration of the metal-oxide may vary continuously throughout the layer, thus creating a gradient solid dispersion layer. Such a construction of the laser-absorbing layer may improve the sensitivity of the printing member in comparison to

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conventional printing members having a metal layer as explained hereinbelow.”

Additional support can be found at page 9, lines 6-9, which recites:

“The structure of the laser absorbing layer according to some embodiments of the present invention may accelerate the imaging process and may improve the sensitivity of the printing plate to the laser energy. Therefore, a printing plate structured according to some embodiments of the present invention may be exposed by a lower energy and/or may be exposed for shorter period of time than a standard printing plate” and further at page 9, lines 24-26, which recites: “Alternatively, the concentration of the metal may be higher in the middle of layer 104 while the concentration of the metal-oxide may be higher at both edges of layer 104, namely, at the top close to coating layer 15 and at the bottom close to base layer 102”.

Applicants respectfully assert that the combination of Teng and Crawford, does not teach or suggest that less laser energy is needed for ablating the laser-absorbing layer than what would be needed for ablating a laser-absorbing layer “not having the gradient of concentration ratios but having about the same thickness and constituents than that of the layer-absorbing layer”.

In the Office action, the Examiner has alleged that one would be motivated to combine Teng with Crawford to improve the adhesion of the MMO ablation layer to the substrate. However, improving the adhesion of the ablation layer to the substrate would be thought by one skilled in the art as contrary to improving ablation. This is because it is the debonding of the laser-absorbing layer from the substrate that accelerates the heating process thereby reducing the required laser energy needed for ablation. Improving adhesion would result in more, not less power necessary to ablate the ablation layer. Thus, to use less power, one would want less adhesion which would aid in debonding, not better adhesion which would need more power for debonding.

The entire focus and purpose of the invention claimed herein is to have a printing member with a layer which ablates with less ablation energy than previously possible with a layer of the approximate thickness. It is respectfully submitted that applying Teng's teaching to Crawford's vapor deposition would not result in the claimed gradient which provides for such ablation efficiency.

Therefore, the disclosures of Teng and Crawford alone or in combination do not render amended Claim 1 obvious. It is respectfully submitted that the Nishida et al. reference (US 5,417,164) cannot cure the deficiencies of the combination of the Teng and Crawford disclosures since it is not directed to a metal/metal oxide combination in a laser ablatable layer.

In fact, Applicants respectfully assert that a person skilled in the art would actually expect that more energy would be required to ablate a layer having strong adhesion with the substrate than that required to ablate a layer having weaker adhesion to the substrate.

Therefore, the recitation "wherein the concentration ratio of the metal to metal oxide within the laser-absorbing layer is higher than the concentration ratio of the metal to metal oxide at both edges of the laser-absorbing layer so that less laser energy is needed for ablating the laser-absorbing layer than what would be needed for ablating a laser-absorbing layer not having the gradient of concentration ratios but having about the same thickness and constituents than that of the layer-absorbing layer" is not obvious and is an unexpected feature to one skilled in the art.

The Examiner states that Teng teaches an on-press developing method and that Applicant teaches the same. This is in error. Nowhere in the specification is on-press development taught. Instead, Applicants' teach on-press plate making, not on-press developing. Still further, ink or ink repellent material cannot develop the claimed gradient which requires less laser energy for ablating the laser-absorbing layer than what would be needed for ablating a laser-

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absorbing layer not having the gradient of concentration ratios but having about the same thickness and constituents than that of the layer-absorbing layer.

Claim 1 specifically recites this unexpected and distinguishing feature. Increasing the ablation efficiency of the laser absorbing layer saves energy, reduces the cost of the laser, and reduces the exposure time. Therefore, the Applicants assert that specifying such a layer distinguishes it from the prior art.

For the foregoing reasons, Applicants respectfully request that the rejections of the claims under 35 U.S.C. § 103(a) be withdrawn. Such action is respectfully solicited.

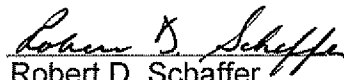
CONCLUSION

In view of the foregoing, Applicants submit that the pending claims clearly distinguish over the prior art of record and are in condition for allowance. Favorable consideration and passage to issue of the present application is therefore respectfully requested.

The Examiner is invited to telephone the undersigned to discuss any still outstanding matters with respect to the present application.

Please charge or credit any fees associated with this paper to deposit account No. 50-3355.

Respectfully submitted,



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